

**Comparison of efficacy of Systemic steroids
versus intratympanic injection of steroids in
sudden sensorineural hearing loss**

Thesis

Submitted for partial fulfillment of master degree

By

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(M.B.B.CH)

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Abstract

Background: Sudden sensorineural hearing loss (SSNHL) is one of the challenging issues in otology. Despite adequate investigations, most cases remain idiopathic. The unknown aetiology in most cases makes the treatment of SSNHL widely controversial. Systemic steroids have been the mainstay of the treatment of idiopathic sudden sensorineural hearing loss (ISSNHL) for a long time despite their side effects. Intratympanic injection of steroids seems to be an effective treatment of ISSNHL with the advantage of avoiding the systemic side effects of steroids.

Objective: The aim of this study is to compare the efficacy of systemic steroids versus intratympanic injection of steroids in the treatment of ISSNHL.

Patients and methods: This is a prospective randomized comparison study that included 20 patients presenting with ISSNHL. They were divided into 2 groups according to method of treatment. The first group included 10 patients who received intratympanic injection of steroids and the second group included 10 patients who received systemic steroids. Patients of both groups were evaluated before and after treatment (after 2 weeks, 1 month and 3 months of treatment) with pure tone audiometry, speech discrimination scores and speech reception thresholds. The data of both groups were compared and statistically studied.

Results: In the first group, the pre-treatment hearing threshold averages ranged from 55 to 110 dB with a mean of 76.5 ± 20.2 dB and the post-treatment hearing threshold averages (after 3 months) ranged from 20 to 110 dB with a mean of 52 ± 32.3 dB. On comparing the means of pre-treatment and post-treatment hearing threshold averages, the difference was statistically significant (P-

value = 0.001). The overall hearing recovery rate was 70%. In the second group, the pre-treatment hearing threshold averages ranged from 55 to 100 dB with a mean of 74 ± 18.5 dB and the post-treatment hearing threshold averages (after 3 months) ranged from 25 to 100 dB with a mean of 54.5 ± 29.5 dB. On comparing the means of pre-treatment and post-treatment hearing threshold averages, the difference was statistically significant (P-value= 0.005). The overall hearing recovery rate was 60%.

Conclusion: Intratympanic injection of steroids and systemic steroids are equally effective treatments of ISSNHL. Intratympanic injection of steroids is an effective treatment of ISSNHL and has less complications than systemic steroids.